

CLAIMS

1. Sizing composition for insulation products based on mineral wool, especially glass or rock wool,
5 comprising an epoxy resin of the glycidyl ether type and an amine hardener, characterized in that it furthermore includes an accelerator chosen from imidazoles, imidazolines and mixtures thereof.
- 10 2. Composition according to Claim 2, characterized in that the accelerator is imidazole, 1-methylimidazole, 2-methylimidazole, 2-phenylimidazole, 2-ethyl-4-methylimidazole, 4,4'-methylenebis(2-ethyl-5-methylimidazole) or 2-ethyl-N-phenylimidazoline.
- 15 3. Composition according to Claim 1 or 2, characterized in that the epoxy resin is obtained by the reaction of epichlorohydrin with an alcohol, preferably a polyol.
- 20 4. Composition according to one of Claims 1 to 3, characterized in that the resin has an EEW (Epoxy Equivalent Weight) of between 150 and 2000, preferably between 160 and 700 and better still at most equal to
25 300.
- 30 5. Composition according to one of Claims 1 to 4, characterized in that the epoxy resin has a water dilutability, at 20°C, of at least 500%, preferably 1000%.
- 35 6. Composition according to one of Claims 1 to 5, characterized in that the hardener is chosen from aliphatic polyamines, such as diethylenetriamine (DETA), triethylenetetramine (TETA), tetraethylenepentamine (TEPA) and polyglycoldiamines, cycloaliphatic polyamines, such as 1,3-bis(aminomethyl)cyclohexane, 4,4-diaminocyclohexylmethane, methylenediamine and 2,4-diaminocyclohexanol, and aromatic polyamines, such

as m-phenylenediamine, m-xylylenediamine, diethyltoluenediamine, diaminodiphenylsulphone and dicyandiamine.

5 7. Composition according to one of Claims 1 to 6, characterized in that it contains the accelerator in an amount of 0.1 to 5 parts by weight of dry matter per 100 parts by weight of dry matter of epoxy resin/hardener.

10 8. Composition according to one of Claims 1 to 7, characterized in that the hardener has an amine equivalent weight/H ratio of 20 to 300.

15 9. Composition according to one of Claims 1 to 8, characterized in that it furthermore includes the following additives, per 100 parts by weight of dry matter of resin/hardener:

- 0 to 2 parts, preferably around 0.5 part, of a coupling agent such as a silane;
- 0 to 20 parts, preferably 6 to 15 parts, of an oil.

10. Process for manufacturing a thermal and/or 25 acoustic insulation product, based on mineral wool, in which:

- a) mineral fibres are formed from a molten mineral composition;
- b) a sizing composition according to one of 30 Claims 1 to 10 is sprayed onto the fibres obtained at a);
- c) the fibres are collected in the form of a sheet; and
- d) the sheet is subjected to a heat treatment at a temperature below about 260°C, preferably around 220 to 240°C.

35 11. Process according to Claim 10, characterized in that the accelerator is mixed with the other constituents of the size before being sprayed onto the

fibres.

12. Process according to Claim 10, characterized in
that the accelerator is applied separately from the
5 spraying of the other constituents of the size onto the
fibres.

13. Thermal and/or acoustic insulation product based
on mineral wool, especially glass or rock wool,
10 provided with a sizing composition according to one of
Claims 1 to 9.

14. Product according to Claim 13, characterized in
that the total weight of cured binder represents from
15 0.5 to 15%, preferably 1 to 12% of the total weight of
mineral fibres.

15. Product according to Claim 13 or 14, characterized
in that it furthermore includes a veil of mineral
20 fibres, especially glass fibres, having a weight of
between 10 and 300 g/m², placed on at least one of the
external faces of the said product and in that the said
veil comprises at least 1% by weight of cured binder
obtained from the sizing composition according to one
25 of Claims 1 to 9.

16. Use of the sizing composition according to one of
Claims 1 to 9 for improving the mechanical strength
after ageing, especially in a wet environment, of
30 insulation products based on mineral wool.

17. Use according to Claim 15, characterized in that
the wool is glass wool or rock wool.